

ABSTRACT OF THE DISCLOSURE

A mass transfer column (10) is provided with at least one vapor-liquid contact tray (12) that is disposed within the open internal region (14) defined by a shell (16) of the column (10). At least one expansion ring (26) underlies and supports the vapor-liquid contact tray (12). An expander (38) is associated with first and second end segments (32, 34) of the expansion ring (26) that define a cutout (36) in the expansion ring (26). The expander (38) includes brackets (48) welded to the end segments (32, 34) and a threaded member (50) that extends through the brackets (48) and carries nuts (54). Turning the nuts (54) against facing surfaces of the brackets (48) causes the first and second end segments (32, 34) of the expansion ring (26) to be forced apart to cause an increase in the circumference of the expansion ring (26), thereby sealing the expansion ring (26) against the inner surface of the column shell. At least one seal plate (58) is positioned on the threaded member (50) to block the cutout (36) in the expansion ring (26). Rods (27) extend between the expansion ring (26) and a support ring (24) that is welded to the column shell (16) to transfer a portion of the load carried by the expansion ring (26) to the support ring (24).